Butterfly rash

All major organs may be affected, including the brain and nervous system

Pleural effusions

Heart problems

Lupus nephritis

Arthritis

Raynaud's phenomenon
Going MiLES to Identify Lupus

Systemic lupus erythematosus (SLE), a chronic, inflammatory, autoimmune disease, can attack tissues throughout the body, including those of the skin, joints, heart, lungs, kidneys and brain. The disease is believed to affect some 1.5 million people in the United States, but the key word is “believed”; one knows for sure. Emily Somers, PhD, ScM (below left), an epidemiologist in the Rheumatology division who studies lupus and other autoimmune diseases, and W. Joseph McCune, MD (below right), professor of Internal Medicine, are changing that. The two serve as co-principal investigators of the Michigan Lupus Epidemiology and Surveillance (MiLES) Program, an initiative from the Centers for Disease Control and Prevention (CDC) to build a registry of SLE cases. The registry will allow Drs. McCune and Somers to estimate the prevalence and incidence of the disease in two counties in southeast Michigan: Wayne County, which includes the city of Detroit, and Washtenaw County, which includes Ann Arbor.

“People have guessed, but we really don’t know how many cases we actually have,” says Dr. McCune. “No one knows the real burden of disease with lupus or how it’s distributed among different groups.” Researchers do know the disease is much more common in women; higher rates are also seen in African American, Asian, Hispanic and Native American populations. The MiLES study is the largest of its kind to date, and it’s population-based, meaning investigators are searching for cases among county residents at large, not only patients who visit a hospital or specialty clinic. The counties covered by MiLES project are diverse and—with two years still to go in the study—the registry already includes a larger number of cases among African Americans than any other lupus investigation.

Public health surveillance studies are essential in order to document the magnitude of any health problem. Their results inform public health planning and resource allocation. They also help identify trends, such as whether incidence is increasing or declining, which reveal resource needs and help scientists generate hypotheses for further research. “There hasn’t been a whole lot of surveillance of autoimmune conditions,” says Dr. Somers. “We have a lot to learn about trends in these diseases. Lupus, for example, predominantly affects women, and so when we’re looking at subsets of the disease population or features in men, there are a lot of unknowns as far as the natural history of the disease.”

The MiLES study is part of CDC efforts to implement the National Arthritis Action Plan, a comprehensive public health strategy to reduce the disability associated with arthritis and improve quality of life. In addition to MiLES, the CDC has also sponsored the Georgia Lupus Registry. Both will serve as prototypes for a national registry, which the CDC is planning.

To carry out the MiLES project, Drs. Somers and McCune work closely with the Michigan Department of Community Health to identify lupus cases. Data is preliminary since the study is still in progress, but so far it is providing insight: prevalence is higher than estimates indicated; kidney involvement is higher among African Americans than whites with lupus; men have more neuropsychiatric involvement than women with the disease. Abstracts have appeared in the journal Arthritis & Rheumatism and have been presented at American College of Rheumatology scientific meetings.

“Lupus is a complicated disease with dozens of possible manifestations,” says Dr. McCune. Researchers evaluate about 50 disease characteristics and conduct a thorough analysis to ensure that cases aren’t included in the registry that don’t belong. Their finely tuned process for identifying the disease may lead to an update of the standard diagnostic criteria that doctors nationwide use with patients, an additional benefit that would affect care well beyond southeast Michigan.

The Michael H. and Marcia S. Klein Professorship in Rheumatic Diseases

Many fellows are drawn to the U-M Rheumatology Division because they want to do research on lupus. “We have a strong lupus clinic here, and basic research into this disease has been a strength of the program for at least 20 years,” says Dr. Fox. A new professorship, The Michael H. and Marcia S. Klein Professorship in Rheumatic Diseases, “will support that work in perpetuity,” he adds. W. Joseph McCune, MD, will be installed as the first Michael H. and Marcia S. Klein Professor in 2009. See the full article in the Development section, page 59.
Funding the future
The Rheumatology division has a loyal following of more than 150 former trainees. One dedicated alumus has made a generous and meaningful gift. Joseph J. Weiss, MD (Rheumatology Fellowship 1971-72), of Livonia, Michigan, has established a bequest in his estate that will create the Ivan Duff/George Thompson Fund. The fund is named for two significant mentors to Dr. Weiss.

“This bequest is extremely important to the division,” says David Fox, MD, professor of Internal Medicine and division chief, “particularly since it’s directed toward fellowship training. A lot of pieces have to be in place to provide training in both academic work and clinical practice. This is especially important in rheumatology, since the specialty is quite broad. Rheumatologic diseases affect all organ systems of the body.”

Dr. Weiss completed fellowship training in 1972 at the Rackham Arthritis Research Unit of the Division of Rheumatology. He went on to join the faculty and taught for nine years at Wayne County General Hospital, which was affiliated with the U-M. The hospital closed in 1981, and Dr. Weiss decided to pursue his interest in opening a private community-based rheumatology practice. “It was a good move for me; it’s worked out well,” he says. “It’s still exciting—you never learn it all.”

The U-M Rheumatology Division has never been far from his mind, he adds. “That training has always been a part of me even though, in effect, I drifted physically. I had the opportunity to work with a group of marvelous people—a number of fine physicians who not only were excellent rheumatologists but clearly first-class people. Since then I’ve tried to practice in such a manner that if my mentors were to look at my patient charts, they’d be pleased. I hold those people up as the standard to reach.”

Today’s fellows strive to meet the program’s high standards as well. Earning a spot is a highly competitive process, with three new fellows selected annually from an average of 100 applicants. Under the direction of Rory Marks, MD, and Administrator Janet Stevens, fellows complete two years of core training with an opportunity to continue a focused research project in additional years of training. Fellows are steeped in all aspects of clinical rheumatology—the division’s ambulatory clinics see more than 20,000 patients each year suffering from common arthritis to rare autoimmune diseases.
The current corps of fellows, researchers and faculty hail from more than a dozen countries and are pursuing work on a wide range of clinical and research subjects. They have presented work at The American College of Rheumatology annual meeting and other important professional meetings. “We have a diverse but focused, cohesive group of fellows, especially in how they support each other and respect each other’s work,” says Stevens.

The Rackham Arthritis Research Unit was founded in 1937 and began fellowship training shortly thereafter, making it one of the oldest programs in the country. Its storied history continues—and will continue. With his bequest, Dr. Weiss hopes to attract new fellows into rheumatology and provide access to funds to support a well-rounded experience. That might mean helping with anything from unorthodox research endeavors to travel expenses for an international meeting or symposium. Dr. Weiss sums up the reason why succinctly but aptly: “Fellows are the very basis for the future.”